

ABSTRACT OF THE DISCLOSURE

A method for depositing a dielectric layer having a multi-layer structure on a substrate includes forming a first oxidation barrier layer on a surface of a substrate; forming a first dielectric layer on the first oxidation barrier layer; forming a second oxidation barrier layer on the first dielectric layer; forming a plurality of additional dielectric layers on the second oxidation barrier layer, one of a plurality of additional oxidation barrier layers is disposed between each of the plurality of additional dielectric layers and an adjacent additional dielectric layer. Accordingly, a capacitor having low leakage current and high capacitance is obtained. In addition, a dielectric constant is controlled by adjusting a lattice constant so that a multi-layer structure of high dielectric constant is formed on a large substrate.